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## EDUCATION

- 1995 Ph.D. (Physics), McGill University, Montréal, Canada. (Dean's Honour List)  
*"Intensity fluctuation spectroscopy with coherent X-rays."*  
Supervisor: Professor Mark Sutton.
- 1990 M.Sc. (Physics), University of Waterloo, Waterloo, Ontario, Canada.  
*"A study of high purity Cd<sub>x</sub>Se<sub>1-x</sub> vacuum deposited thin films."*  
Supervisor: Professor D.E. Brodie.
- 1987 B.Sc. (Physique), Université Laval, Ste-Foy, Canada.

## ACADEMIC AWARDS

- 1996-97 Natural Science and Engineering Research Council of Canada (NSERC) postdoctoral fellowship.
- 1992-93 Fonds aux Chercheurs et à l'Aide à la Recherche du Québec (FCAR) doctoral fellowship and McGill University Carl Reinhart Fellow.
- 1990-92 NSERC doctoral scholarship.
- 1988-90 NSERC master's scholarship and University of Waterloo fellowship.
- 1987-86 NSERC summer student scholarships, at the University of Toronto.

## PROFESSIONAL MEMBERSHIP AND SERVICE

- 1989- Member of the Canadian Association of Physicists
- 1991- Member of the Canadian Institute for Synchrotron Radiation
- 1991- Member of the American Physical Society
- 1989- Member of the Materials Research Society
- 1999- Member of the American Association for the Advancement of Science
- Feb. 2002- Co-chair, APS Technical Working Group
- Apr. 2006

2003-2006	Chair, APS General Users Review Panel on Instrumentation
2006-	Argonne Center for Nanomaterials Proposal Review Panel
2007-	Ultrafast Special Interest Group, APS, Webmaster and co-organizer
2008	External reviewer, Director Review of LUSI, LCLS, SLAC March 3-5, 2008
2008	Future of X-ray Operation and Research (XOR) Committee
2009	Advanced Photon Source Upgrade Technical Advisory committee
May 2010-	Advanced Photon Source User Organization Steering Committee
Aug. 2011-	Advanced Photon Source General User Program Advisory Committee

## WORK AND TEACHING EXPERIENCE

2004-	<b>Beamline Scientist, X-ray Science Division, Advanced Photon Source, Argonne National Laboratory (Associate Research Scientist level).</b> My responsibilities as Sector 7 Coordinator include the administration of our beamline operation, the supervision of four PhD scientists and a scientific associate. I am also continuing my operation and research role at Sector 7 started in 1998.
1998-2004	<b>Senior Research Associate in the Physical Sciences II, Department of Physics, University of Michigan.</b> As a beamline Scientist for the University of Michigan, Howard University, Lucent Technologies-Bell Labs Collaborative Access Team (MHATT-CAT) at the Advanced Photon Source (APS), my task was to support the operation of the MHATT-CAT insertion device beam line, to participate in the scientific and professional activities of the CAT, to help users of this facility to perform their experiments, and to pursue an active research program focused on coherent and incoherent time-resolved X-ray scattering techniques. While stationed at the APS, I became a critical element in the operation of a state of the art synchrotron radiation research facility. In 2001, I became the Sector 7 Manager.
1998	<b>Discussion Instructor at the Department of Physics, University of Michigan.</b> I taught three sections of Introduction to Electromagnetism. The students teaching evaluation is available upon request.
1996-98	<b>Postdoctoral Fellow at the Department of Physics of the University of Michigan.</b>
1991-95	<b>Teaching Assistant, Department of Physics, McGill University.</b> I marked assignments for 3rd year Electromagnetism, Biophysics and 2nd year Thermodynamics.
1994	<b>Assistant System Manager</b> of the condensed matter physics computer system.
1988-90	<b>Teaching Assistant, Department of Physics, University of Waterloo.</b> I marked first year physics, 4th year optics and graduate quantum mechanics.
1988	<b>Instructor, Extension de l'enseignement, Université Laval, Ste-Foy, Québec.</b> I taught three first year physics courses: mechanics, electromagnetism and optics.
1987-88	<b>Substitute teacher, Ecole Polyvalente LaCamaradière, Québec, Québec.</b>

## Grants

- October 2007-2009     "Novel Concepts in Streak-Camera Development, and Applications", Bernhard W. Adams, K. Attenkofer, Eric M. Dufresne, E.C. Landahl, T. Rajh, L. X. Chen, A. Miceli, J. Lee, S. Ross, Strategic LDRD FY08-09.
- October 2007-2010     "Ultrafast x-ray tracking of laser-controlled molecular motions", Linda Young, L. Chen, R. Dunford, Elliot Kanter, B. Kraessig, R. Santra, S. Southworth, D. Tiede, S. Vajda, B. Adams, D. Arms, K. Attenkofer, Eric Dufresne, E. Landahl, D. Walko and J. Wang, Strategic LDRD FY08-10.

## TALKS and CONFERENCE PRESENTATIONS

- October 2011     Invited talk at the Time Resolved X-Ray Science at High Repetition Rate Workshop of the SSRL-LCLS Users Meeting, SLAC National Lab, CA.
- June 2011     Invited talk at the Ultrafast SIG meeting.
- May 2011     Invited talk at the NSLS CFN joint Users Meeting, Workshop 7: X-ray Diffraction and Spectroscopy to Study Dynamic Phenomena under Extremes.
- Apr. 2011     Invited talk at the Mechanical Engineering and Design group luncheon seminar.
- Mar. 2011     Invited talk, APS Technical Working Group, Chicago, IL
- Feb. 2011     Invited talk, CLASSE seminars, CHESS, Cornell University, Ithaca, NY
- Jan. 2011     Invited talk, Dynamic Phenomena Under Extremes, University of Texas, Austin, TX
- Dec. 2010     Invited talk, Technical review of the SPX beamlines, Argonne.
- Sep. 2010     Contributed talk, Pan-American Synchrotron Radiation Instrumentation Conference 2010, Chicago, IL.
- May 2010     Invited talk, Workshop on Options for Ultrafast Science at NSLS-II, Brookhaven National Lab, Upton NY.
- Apr. 2010     Invited talk, XFEL GmbH, Hamburg, Germany
- Nov. 2009     Invited talk, University of Ottawa, Ottawa, Canada.
- Oct. 2009     Invited talk, APS Scientific Advisory Committee Meeting, talk on options for time-resolved science in the Upgrade of APS.
- Oct. 2009     Contributed talk, Workshop on applications of Coherent X-ray Methods, Melbourne University, Melbourne, Australia.
- Sep. 2009     Contributed talk, International SRI 2009 conference Melbourne, Australia
- Jun. 2008     Contributed talk, Canadian Association of Physicists, Université Laval, Québec, Canada
- Jun. 2007     Contributed talk, Coherence 2007, International Workshop on Phase Retrieval and Coherent Scattering, Monterrey CA
- Jun. 2007     Contributed talk, Canadian Association of Physicists, University of Saskatchewan, Saskatoon Saskatchewan
- May 2007     APS User Seminar, Chicago IL.

- Apr. 2007 Invited talk, SRI 2007, Satellite Workshop on Coherence and Polarization
- Apr. 2007 Chair with Joseph Holmes the satellite workshop on Coherence and Polarization at SRI 2007
- Apr. 2007 Contributed talk and one poster, SRI 2007, Baton Rouge LA
- Jun. 2006 Contributed talk, and one poster, the 2006 International Synchrotron Radiation Instrumentation Conference in Korea.
- Jun. 2006 Contributed talk, Canadian Association of Physicists, Brock University, St-Catherines ON.
- Feb. 2006 Poster, Gordon 2006 Conference on Ultrafast Phenomena, CA.
- Dec. 2005 APS Technical Working Group, Chicago IL.
- Oct. 2005 APS Technical Working Group, Chicago IL.
- Jun. 2005 APS User Seminar, Chicago IL.
- Aug. 2004 Invited talk, 2004 XOR Retreat, Argonne IL.
- Jun. 2004 Invited talk, CUOS, Univ. of Michigan, Ann Arbor MI.
- Mai. 2004 Poster presented at the Ultrafast 2004 conference, San Diego CA
- Apr. 2004 APS Technical Working Group, Chicago IL.
- Aug. 2003 Two posters presented at SRI 2003, the Synchrotron Radiation Instrumentation Conference in San Francisco, CA.
- Jun. 2003 Invited talk, APS,ESRF, Spring-8 Workshop, ANL, IL
- May. 2003 Invited talk, Univ. of Michigan, CUOS, Ann Arbor MI.
- Mar. 2003 APS Technical Working Group, Chicago IL.
- Dec. 2002 Invited talk, INRS-Energie, Montreal, Canada
- Sept. 2002 APS Technical Working Group, Chicago IL.
- Aug. 2002 APS Technical Working Group, Chicago IL.
- Feb. 2002 APS Technical Working Group, Chicago IL.
- Jan. 2002 APS User Seminar, Chicago, IL.
- Sep. 2001 APS Technical Working Group, Chicago IL.
- Aug. 2001 Two posters presented at SRI 2001, the Synchrotron Radiation Instrumentation Conference in Madison, WI.
- Mar. 2001 APS Technical Working Group, Chicago IL.
- Oct. 2000 APS Technical Working Group, Chicago IL.
- June 2000 Talk at the Canadian Association of Physicist Conference, Toronto, ON, Canada.
- Oct. 1999 Poster presented at SRI 99, the Synchrotron Radiation Instrumentation Conference at SSRL, Palo Alto, CA.

- Aug. 1999 Poster presented at X99, the 1999 X-ray Absorption and Spectroscopy Conference, Chicago, IL.
- June 1998 Talk at the Canadian Association of Physicist Conference, Waterloo, ON, Canada.
- May 1997 Invited talk at the NSLS Annual Users' Meeting, Workshop on XPCS, Upton, NY.
- Nov. 1996 Invited talk, Department of Physics, Oakland University, Rochester, MI.
- Jan. 1996 NSLS lunch time seminar, Brookhaven National Labs, Upton, NY.
- June 1995 Canadian Association of Physicist Conference, Québec, PQ, Canada.
- May 1995 Department of Physics, University of Michigan, Ann Arbor MI.
- May 1995 Department of Physics, Brookhaven National Labs, Upton, NY.
- June 1990 Poster presented at the Canadian Association of Physicist Conference, Guelph ON, Canada.

### **Workshop and conference organization**

- October 2011 Workshop 1: Time Resolved X-Ray Science at High Repetition Rate of the SSRL-LCLS Users Meeting, SLAC National Lab, CA., co-organized with J. Corbett, C.C. Kao, D. Keavney, A. Lindenberg, A. Mehta, L. Young
- June 2011 XDL2011 Workshop 3- Ultra-fast Science with "Tickle and Probe", co-organized with Robert Schoenlein, Brian Stephenson, and Joel Brock.
- May 2011 APS User meeting APS Workshop 3 Opportunities in Magnetic, Atomic, and Molecular Dynamics with a Short Pulse Soft X-ray Source, co-organized with David Keavney, and Yuelin Li.

### **Refereeing work.**

Reviewed articles for Journal of Synchrotron Radiation, Review of Scientific Instrument, and Physical Review Letters.

MSc Thesis committee for G. Jackson Williams, DePaul University 2010.

## PUBLICATIONS

### Refereed Journal Articles

1. *Domain- and symmetry-transition origins of reduced nanosecond piezoelectricity in ferroelectric/dielectric superlattices*, Pice Chen, Ji Young Jo, Ho Nyung Lee, Eric M. Dufresne, Serge M. Nakhmanson, and Paul G. Evans, Submitted to New Journal of Physics.
2. *Ultrafast polarization dynamics in ferroelectric nanolayers*, Dan Daranciang, Matthew J. Highland, Haidan Wen, Nathaniel Brandt, Harold Y. Hwang, Michael Vattilana, Steve M. Young, John Goodfellow, Tingting Qi, Ilya Grinberg, David M. Fritz, Marco Cammarata, Diling Zhu, Henrik T. Lemke, Donald A. Walko, Eric M. Dufresne, Yuelin Li, Jorgen Larsson, Klaus Sokolowski-Tinten, Andrew M. Rappe, David A. Reis, Keith A. Nelson, Paul H. Fuoss, G. Brian Stephenson and Aaron M. Lindenberg, submitted to Phys. Rev. Lett.
3. *Nanosecond dynamics of ferroelectric/dielectric superlattices*, Ji Young Jo, Pice Chen, Rebecca J. Sichel, Sara J. Callori, John Sinsheimer, Eric M. Dufresne, Matthew Dawber, and Paul G. Evans, Phys. Rev. Lett. **107**, (No.5 July 29) 055501 (2011) DOI: 10.1103/PhysRevLett.107.055501.
4. Alan Kastengren, Christopher Powell, Eric M. Dufresne, Donald A. Walko, *Application of X-Ray Fluorescence to Turbulent Mixing*, J. Synch. Rad. (online 13 July) vol. **18**, part 5 (September) 811.815 (2011)
5. Stephen T. Kelly, Jonathan C. Trenkle, Lucas J. Koerner, Sara C. Barron, Noel Walker, Phillip O. Pouliquen, Mark W. Tate, Sol M. Gruner, Eric M. Dufresne, Timothy P. Weihs and Todd C. Hufnagel, *Fast x-ray microdiffraction techniques for studying irreversible transformations in materials*, J. Synch. Rad. **18** May 464-474 (2011). DOI:<http://dx.doi.org/10.1107/S0909049511002640>.
6. Ji Young Jo, Rebecca J. Sichel, Eric M. Dufresne, Ho Nyung Lee, Serge M. Nakhmanson, and Paul G. Evans, *Component-specific electromechanical response in a ferroelectric/dielectric superlattice*, Phys. Rev. B **82**, 174116 Nov. (2010) DOI:<http://dx.doi.org/10.1103/PhysRevB.82.174116>.
7. Ji Young Jo, Rebecca J. Sichel, Ho Nyung Lee, Serge M. Nakhmanson, Eric M. Dufresne, and Paul G. Evans, *Piezoelectricity in the dielectric component of nanoscale dielectric/ferroelectric superlattices*, Phys. Rev. Lett. **104**, 207601 (2010) DOI:<http://dx.doi.org/10.1103/PhysRevLett.104.207601>.
8. Robert V. Reeves, Jeremiah D.E. White, Eric M. Dufresne, Kamel Fezzaa, Steven F. Son, Arvind Varma, and Alexander S. Mukasyan, “*Microstructural transformations and kinetics of high-temperature heterogeneous gasless reactions by high-speed x-ray phase contrast imaging*”, Physical Review B **80** 224103-1 224103-8 (2009). It featured as an Editor’s choice.  
Download at <http://dx.doi.org/10.1103/PhysRevB.80.224103>.
9. Alexei Grigoriev, Rebecca J. Sichel, Ji Young Jo, Samrat Choudhury, Long-Qing Chen, Dane Morgan, Ho Nyung Lee, Eric C. Landahl, Bernhard W. Adams, Eric M. Dufresne, and Paul G. Evans, “*Stability of unswitched ferroelectric polarization in ultrathin epitaxial Pb(Zr,Ti)O<sub>3</sub>*”, Physical Review B **80** (July 21) 014110-1 to 014110-6 (2009). See <http://dx.doi.org/10.1103/PhysRevB.80.014110>.
10. E.M. Dufresne, S.B. Dierker, L.E. Berman and Z. Yin, “*Development of New Apertures for Coherent X-ray Experiments.*”, Journal of Synchrotron Radiation, **16** 358-367 (May) (2009).  
See <http://dx.doi.org/10.1107/S0909049509003720>.
11. T. Ejdrup, H. T. Lemke, K. Haldrup, T. N. Nielsen, D. A. Arms, D. A. Walko, A. Miceli, E. C. Landahl, E. M. Dufresne and M. M. Nielsen, “*Picosecond time-resolved laser pump/X-ray probe*

- experiments using a gated singlephoton-counting area detector”, Journal of Synchrotron Radiation* **16** 387-390 (May) (2009), see <http://dx.doi.org/10.1107/S0909049509004658>.
12. E. P. Kanter, R. Santra,<sup>1</sup>, C. Hohr, E. R. Peterson, J. Rudati, D. A. Arms, E. M. Dufresne, R. W. Dunford, D. L. Ederer, B. Krassig, E. C. Landahl, S. H. Southworth, and L. Young, ”*Characterization of the Spatiotemporal Evolution of Laser-generated Plasmas*”, *J. Appl. Phys.* **104** no 7 (October 9) 073307-1 to 073307-7 (2008). See <http://dx.doi.org/10.1063/1.2991339>.
  13. N . Husseini , D . Kumah , J . Yi , C . Torbet , D . Arms , E . Dufresne , T . Pollock , J . Wayne Jones , R . Clarke, ”*Mapping single-crystal dendritic microstructure and defects in nickel-base superalloys with synchrotron radiation.*”, *Acta Materialia* , Volume 56 , Issue 17 (October), Pages 4715 - 4723 (2008). See <http://dx.doi.org/10.1016/j.actamat.2008.05.041>.
  14. A. Grigoriev, R. Sichel, H. N. Lee, E.C. Landahl, B. Adams, E. M. Dufresne, and P. G. Evans, ”*Nonlinear piezoelectricity in epitaxial ferroelectrics at high electric fields*”, *Phys. Rev. Lett.* **100** 027604 (January 18) (2008). See <http://dx.doi.org/10.1103/PhysRevLett.100.027604>.
  15. S. H. Southworth, D. A. Arms, E. M. Dufresne, R. W. Dunford, D. L. Ederer, C. Höhr, E. P. Kanter, B. Kraessig, E. C. Landahl, E. R. Peterson, J. Rudati, R. Santra, D. A. Walko, and L. Young, ”*K-edge x-ray-absorption spectroscopy of laser-generated Kr+ and Kr2+*”, *Phys. Rev. A* **76**, 043421 (2007). See <http://dx.doi.org/10.1103/PhysRevA.76.043421>.
  16. ”*Real time structural modification of epitaxial FePt thin films under x-ray rapid thermal annealing using undulator radiation*”, J. R. Skuza, R. A. Lukaszew, E. M. Dufresne, D. A. Walko, C. Clavero, A. Cebollada C. N. Cionca and R. Clarke, *Appl. Phys. Lett.* **90** 251901 (2007). See <http://dx.doi.org/10.1063/1.2749426>.
  17. ”*Synchronizing fast electrically driven phenomena with synchrotron x-ray probe*” Alexei Grigoriev, Dal-Hyun Do, Paul G. Evans, Bernhard Adams, Eric Landahl, and Eric M. Dufresne *Rev. Sci. Instrum.* **78**, No 2 Feb. 26, 023105 (2007). See <http://dx.doi.org/10.1063/1.2668989>.
  18. ”*Alignment dynamics in a laser-produced plasma*” C. Hohr, E. R. Peterson, N. Rohringer, J. Rudati, D. A. Arms, E. M. Dufresne, R. W. Dunford, D. L. Ederer, E. P. Kanter, B. Krssig, E. C. Landahl, R. Santra, S. H. Southworth, and L. Young *Phys. Rev. A. Rapid Communications* **75**, 011403R (2007). See <http://dx.doi.org/10.1103/PhysRevA.75.011403>.
  19. ”*X-Ray Microprobe of Orbital Alignment in Strong-Field Ionized Atoms*” L. Young, D. A. Arms, E.M. Dufresne, R.W. Dunford, D.L. Ederer, C. Hohr, E.P. Kanter, B. Krassig, E.C. Landahl, E.R. Peterson, J. Rudati, R. Santra, and S.H. Southworth, *Phys. Rev. Lett.* **97**, 083601 August 21 (2006). See <http://dx.doi.org/10.1103/PhysRevLett.97.083601>.
  20. ”*Nanosecond Domain Wall Dynamics in Ferroelectric PbZrTiO<sub>3</sub> Thin Films*” A. Grigoriev, D.-H. Do, D. M. Kim, C.-B. Eom, B. Adams, E. M. Dufresne, and P. G. Evans, *Phys. Rev. Lett.*, **96**, 187601 (2006). See <http://dx.doi.org/10.1103/PhysRevLett.96.187601>.
  21. ”*Subnanosecond piezoelectric x-ray switch*” A. Grigoriev, D.-H. Do, D. M. Kim, C.-B. Eom, B. Adams, E. M. Dufresne, and P. G. Evans, *Appl. Phys. Lett.*, **89**, 021109 (2006). See <http://dx.doi.org/10.1063/1.2219342>.
  22. ”*Synchrotron X-ray Fluorescence Analysis of Copper and Zinc in Silicate and Oxide Minerals from Granitoid Rocks*” D.P. Core, S.E. Kesler, E.J. Essene, E.M. Dufresne, R. Clarke, D.A. Arms, D. Walko, M.L. Rivers, *The Canadian Mineralogist*, **43** pages 1781-1796 (2005). See <http://dx.doi.org/10.2113/gscanmin.43.5.1781>.

23. M.F. DeCamp, D.A. Reis, D.M. Fritz, P.H. Bucksbaum, E.M. Dufresne and R. Clarke, “*X-ray synchrotron studies of ultrafast crystalline dynamics*”, J. Synch. Rad., **12**, Part 2, pages 177-192 (2005). See <http://dx.doi.org/10.1107/S0909049504033679>.
24. A. Fluerasu, M. Sutton, E.M. Dufresne, “*X-Ray Intensity Fluctuation Spectroscopy Studies on Phase-Ordering Systems*”, Phys. Rev. Lett. **94** 055501 (2005). See <http://dx.doi.org/10.1103/PhysRevLett.94.055501>.
25. D.-H. Do, P.G. Evans, E.D. Isaacs, D. M. Kim, C.-B. Eom, and E.M Dufresne, “*Structural visualization of two electric field regimes of polarization fatigue in epitaxial ferroelectric oxide devices*”, Nature Materials, **3**, June 6, 365-369 (2004). See <http://dx.doi.org/10.1038/nmat1122>.
26. Z. Zhang, R.A. Lukaszew, C. Cionca, X. Pan, R. Clarke, A. Zambano, D. Walko, E. Dufresne, S. te Velthius, “*Correlated structural and magnetization reversal studies on epitaxial Ni films grown with molecular beam epitaxy and with sputtering*”, J. Vac. Sci. Technol. A 22(4), p1868-1872 (2004). See <http://dx.doi.org/10.1116/1.1692292>.
27. N.R. Pereira, E.M. Dufresne, R. Clarke, and D.A. Arms, “*Parabolic lithium refractive optics for X-rays*”, Rev. Sci. Instrum. **75**, 37-41 (2004). See <http://dx.doi.org/10.1063/1.1633007>.
28. M.F. DeCamp, D.A. Reis, A. Cavalieri, P. H. Bucksbaum, R. Clarke, R. Merlin, E.M. Dufresne, D.A. Arms, A.M. Lindenberg, A.G. Macphee, Z. Chang, B. Lings, J.S. Wark, S. Fahy, “*Supersonic strain front driven by a dense electron-hole plasma.*”, Phys. Rev. Lett. **91** 165502-1 (2003). See <http://dx.doi.org/10.1103/PhysRevLett.91.165502>.
29. S. Yang, Y. Horibe, C.H. Chen, P. Mirau, T. Tatry, P. Evans, J. Grazul, E.M. Dufresne, “*Ordered Hydrophobic Organosilicates Tempered by Block Copolymers*”, Chem. Mater. Vol. 14, 5173-5178 (2002). See <http://dx.doi.org/10.1021/cm0207503>.
30. B.W. Adams, M.F. DeCamp, E.M. Dufresne and D.A. Reis, *Picosecond Laser-Pump, X-ray Probe Spectroscopy of GaAs*, Rev. Sci. Instrum Vol. 73, December, p4150 (2002). See <http://dx.doi.org/10.1063/1.1425385>.
31. Y. Yacoby, M. Sowwan, E. Stern, J. Cross, D. Brewe, R. Pindak, J. Pitney, E. M. Dufresne and R. Clarke, “*Direct determination of epitaxial interface structure in  $Gd_2O_3$  passivation of GaAs*”, Nature Materials Vol. 1 no. 2, p99-101 (2002). See <http://dx.doi.org/10.1038/nmat735>.
32. E. Dufresne, T. Nurushev, R. Clarke, and S.B. Dierker. “*SAXS Study of Concentration Fluctuations in the Binary Mixture Hexane-Nitrobenzene*”, Phys. Rev. E., Vol. 65, June 21, 065107 (2002). See <http://dx.doi.org/10.1103/PhysRevE.65.061507>.
33. E.M.Dufresne, D.A. Arms, R. Clarke, S.B. Dierker, N.R. Pereira, and D. Foster, “*Lithium metal for x-ray refractive optics*”, Appl. Phys. Lett., **79** no 25 p4085-7 (2001). See <http://dx.doi.org/10.1063/1.1425068>.
34. M.F. DeCamp, D. A. Reis, P. H. Bucksbaum, B. Adams, J.M. Caraher, R. Clarke, C.W.S. Conover, E.M. Dufresne, R. Merlin, V. Stoika, and J.K. Wahlstrand, “*Coherent Control of Pulsed X-ray Beams*”, Nature **413** p825 October 25 2001. See <http://dx.doi.org/10.1038/35101560>.
35. D. A. Reis, M. DeCamp, P. H. Bucksbaum, R. Clarke, E. Dufresne, M. Hertlein, R. Merlin, R. Falcone, H. Kapteyn, M. Murnane, J. Larsson, Th. Missalla, J. Wark, “*Probing impulsive strain propagation with x-ray pulses*”, Phys. Rev. Lett., **86** 3072 (2001). See <http://dx.doi.org/10.1103/PhysRevLett.86.3072>.

36. E. Dufresne, R. Brüning, M. Sutton, G.B. Stephenson and B. Rodricks, “A statistical technique for characterizing X-ray position-sensitive detectors.” Nuclear Instruments and Methods A **364** (1995) 380-393. See [http://dx.doi.org/10.1016/0168-9002\(95\)00335-5](http://dx.doi.org/10.1016/0168-9002(95)00335-5).
37. S. Brauer, G.B. Stephenson, M. Sutton, R. Brüning, E. Dufresne, S.G.J. Mochrie, G. Grübel, J. Als-Nielsen and D.L. Abernathy, “X-ray Intensity Fluctuation Spectroscopy Observations of Critical Dynamics in  $Fe_3Al$ .” Physical Review Letters **74** (1995) 2010-2013. See <http://dx.doi.org/10.1103/PhysRevLett.74.2010>.
38. M. Sutton, R. Brüning and E. Dufresne, “Longitudinal diffraction scans using a position sensitive detector.” Nuclear Instruments and Methods in Physics Research A **355** (1995) 654-659. See [http://dx.doi.org/10.1016/0168-9002\(94\)01113-3](http://dx.doi.org/10.1016/0168-9002(94)01113-3).
39. S.W. Kycia, A.I. Goldman, T.A. Lograsso, D.W. Delaney, D. Black, M. Sutton, E. Dufresne, R. Brüning and B. Rodricks, “Dynamical x-ray diffraction from an icosahedral quasi-crystal.” Physical Review B **48** (1993) 3544-3547. See <http://dx.doi.org/10.1103/PhysRevB.48.3544>.
40. E. Dufresne and D.E. Brodie, “A study of high-purity  $Cd_xSe_{1-x}$  vacuum deposited thin films.” Canadian Journal of Physics **69** (1991) 124. Follow this link for pdf file..

### **Book Chapters**

41. B. W. Adams, P.H. Bucksbaum, M.F. DeCamp, E.M. Dufresne, M.E. Garcia, H.O. Jeschke, A. Lindenberg, D.A. Reis, P. Sondhauss, J.S. Wark, and P. Zambianchi, *Nonlinear Optics, Quantum Optics, and Ultrafast Phenomena with X-ray*, Kluwer Academics Publisher, ISBN 1-4020-7475-1 (2003).

### **Refereed Conference Proceedings**

42. “A technique for high-frequency laser-pump x-ray probe experiments at the APS.”, Eric M. Dufresne, Bernhard Adams, Matthieu Chollet, Ross Harder, Yuelin Li, Steven J. Leake, Loren Beitra, Xiaojing Huang, Ian K. Robinson, Proceedings of the 16th Pan-American Synchrotron Radiation Instrumentation Conference, September 21-24, 2010 in Argonne National Laboratory, USA, Nucl. Instrum. and Meth. in Phys. Res. A **649** (September 1) pages 191-193 (2011)  
DOI:<http://dx.doi.org/10.1016/j.nima.2011.01.050>.
43. “Microsecond X-Ray Microdiffraction And X-Ray Phase Contrast Imaging Studies Of Irreversible Phase Transformation During Rapid Heating”, Stephen T. Kelly, Sara C. Barron, Eric M. Dufresne, Kamel Fezzaa, Timothy P. Weihs, and Todd C. Hufnagel, Proceedings of the 31st Riso International Symposium on Materials Science: Challenges in materials science and possibilities in 3D and 4D characterization techniques. Conference was held on 6-10 September 2010 at Riso National Laboratory for Sustainable Energy, Roskilde, Denmark. Here is the meeting site.
44. “Structural Response of BaTiO<sub>3</sub>/CaTiO<sub>3</sub> Superlattice to Applied Electric Fields”, Ji Young Jo, Rebecca J. Sichel, Ho Nyung Lee, Eric Dufresne, and Paul G. Evans, Proceedings of Symposium F in “Multiferroic and Ferroelectric Materials”, edited by A. Gruverman, C.J. Fennie, I. Kunishima, B. Noheda, T.W. Noh (Mater. Res. Soc. Symp. Proc. Volume 1199E, Warrendale, PA, 2010), paper 1199-F01-06 DOI:<http://dx.doi.org/10.1557/PROC-1199-F01-06>.
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